Copy #2

Stenographic Transcript Of

HEARINGS

Before The

COMMITTEE ON PUBLIC WORKS

UNITED STATES SENATE

WATER QUALITY LEGISLATION

Water Quality Standards

EXECUTIVE SESSION

Washington, D. C.

JUNE 10, 1971

Alderson Reporting Company, Inc.

Official Reporters

300 Seventh St., S. W. Washington, D. C.

NA 8-2345

EXECUTIVE SESSION

WATER QUALITY LEGISLATION

- - -

THURSDAY, JUNE 10, 1971

- - -

United States Senate,

Committee on Public Works,

Washington, D. C.

The committee met at 10:10 a.m., pursuant to call, in room S-207, The Capitol, Senator Edmund S. Muskie presiding.

Present: Senators Muskie, Eagleton, Bentsen, Baker, Beall, and Buckley.

Also present: Barry Meyer, counsel; Thomas C. Jorling, minority counsel; Leon G. Billings, Harold H. Brayman, Richard D. Grundy, , professional staff members.

Senator Muskie. Has anyone distributed the suggested agenda? Pull out this agency.

I think we will start, first, with the second item, water quality standards, on page 15. I will ask the staff to bring us up to date on that. This relates to the Tunney proposal.

Now let me refresh your recollection of what we are trying to do here. We are trying to set the basis for a committee print and it was our objective to try to resolve it in our deliberations today, to agree on a committee print, not as a

final draft or anything, but as something that could be the basis, then, for further committee deliberation and also the solicitation of views from others who are interested in what we are doing.

I guess we are all hoping that the committee print can include as sound a set of options as you can put togather. So let's take up the water quality standards question first. Do you remember the Tunney proposal that would set a national quality standard for water which is fir for fish and wildlife and also for quality for swimming? There is something about ingestion of water, I don't know how you control the ingestion of water.

Senator Baker. Before you go on, Tunney is not here, Buckley is. They were talking about this part, and Hale Boggs said he was interested in pursuing this further. What I am saying is we can go over it pretty good today, but I guess we clearly ought not to discuss it further without them.

Senator Muskie. Tunney would have no objection if we include this.

Senator Buckley. He would like to have it in the print, yes.

Mr. Billings. Mr. Chairman, the staff has attempted to get a reaction to this proposal. We have posed a series of questions to the Administration. They didn't have enough time to prepare an adequate response. We have to go back to them and

get something more in depth. We want to try to find out the extent to which this standard presently applied to the surface water of the U. S., what percentage of water we already had plans for implementation so then we could calculate some indication of when they would expect to achieve it and how much it would cost.

We have also asked the Administration for figures on different highly polluted areas, like the Cuyahoga River, the Ohio River and some others, and what kind of estimate in cost and timeframe for bringing those waters up to this standard.

Senator Baker. What you are saying is it may be necessary for us to set categories?

Mr. Billings. That may be the result of the information throughout. In any event we haven't gotten any information that is of value from the Administration at this point.

Secondly, the staff has spent a number of hours yesterday with the Association of Metropolitan Sewage Agencies, going through the entire print and trying to get some reactions, and we did discuss very briefly this standard. I think the reaction to the St. Louis program is pretty interesting.

While designating the Mississippi River as it flows past St. Louis for swimming might be a nice idea if you tried to swim in it, you would drown. So his concern was that the cost of doing that, raising that river in that standard in terms of St. Louis would be $65 million.

Mr. Meyer. They have primary treatment at St. Louis now, under the agency standard they are required to go to the secondary treatment.

Senator Baker. What does the agency require?

Mr. Meyer. They have adopted a secondary treatment standard.

Senator Baker. What is wrong with secondary treatment? That is not the way secondary treatment is supposed to work, or is it?

Senator Muskie. Why would the secondary treatment produce so little?

Mr. Billings. The flow of water is so great at St. Louis, the quality is such that you don't get an appreciable difference.

Senator Muskie. In other words, you don't process the water through the secondary treatment, the flow is so great?

Senator Baker. That is the old dilution theory.

Mr. Billings. It is the same problem in the New Orleans area.

Senator Baker. You know, that begs the question because Tunney's position is not that this is desirable intrinsically and in and of itself to be able to swim off the bluffs of St. Louis, but rather, that it is a convenient, popular and well-understood standard rather than some esoteric technical statement of objectives, and therefore we ought to establish it without

reference to whether you are going to swim there or ought to swim there or ought not to swim there. Is that your understanding?

Senator Buckley. Sure.

Senator Bentsen. It is technically not feasible.

Senator Baker. If I understand Barry, what he is saying on the St. Louis example on the $60 million is if they spend $60 million for secondary treatment, that it won't make a quantum difference in the quality of water at St. Louis, not because secondary treatment is inefficient or wrong, but rather because the flow of water at St. Louis through the Mississippi River is so great that the dilution factor makes the difference very slight.

Mr. Meyer. The same man paints the point that above the dam, above St. Louis going to the Missouri River, the river there would be capable of that kind of treatment.

Senator Baker. Which gets us right back to the question we had in the very beginning is whether we are going to have a dilution technique or just a standards technique, isn't that right?

Mr. Meyer. The problem we run into, though, is someplace along the line you have to measure the value of the result you are seeking to achieve against the amount of dollars that have to be invested to produce that kind of outflow.

Senator Baker. Once again that is the criteria concept

and that is a perfectly valid one, we have used it and devised it and lived by it and we are proud of it, but that is not the only answer because the rational also exists that if you accepted the standard system instead of the criteria system, if you get away from the dilution standard, you accomplish multiple purposes that are intrinsically desirable; one, uniformity; two, certainty; three, it automatically creates a criteria of sorts because you are controlling this; and, four, ease of observation and appliance.

All of these things outweigh the fact that the cost effectiveness ratio of this secondary treatment at St. Louis may not be provable in the Mississippi situation, but still and all it gives way to the natural ease with which you can establish national minimum standards.

Mr. Billings. What is called the "Lower Hudson problem" really is if you raise the treatment in New York to achieve the Tunney standards, does that mean for the purpose of uniformity that you should raise everything to tertiary treatment around the country?

Senator Baker. Not necessarily, the implication you were making, I think, is right, that you are going to have to have categories of rivers and streams in which you have a different timeframe of compliance.

Senator Buckley. I would like to point out to this committee language has an escape hatch where Tunney says "is not technologically

feasible" and that exempts it from meeting the standard.

Senator Muskie. Where is that Tunney language? My recollection was that wasn't an escape hatch.

Senator Buckley. Then there was a second deadline.

Senator Baker. I will say this about "technologically feasible," that is a phrase of art now, at least in the work of this committee, and an unfortunate one, because "technologically feasible" as with "economically feasible" becomes so subjective that it is impossible to determine whether or not it is or is not an escape hatch. It depends on the Administrator.

Mr. Billings. In terms of waste water treatment, as the hearings that Senator Eagleton held, indicated the closed cycle systems are for almost industries and certainly for municipalities technologically feasible.

Senator Buckley. Doesn't feasibility include economics?

Mr. Billings. We have really defined economics out of feasibility.

Senator Muskie. This says "to provide the national standards as soon as technologically feasible, and in no event no later than December 31, 1980."

Senator Buckley. Taking that out, that second deadline, and slice in a direction to the Administrator to come up with the various areas and have recommendations, because we have an immediate target date for most of the water in this country and then tailor the balance.

Senator Baker. May I back off and take another long overview of this subject? May I suggest, Mr. Chairman, the Clear Air Act with automobile emissions we set a date and we required emission standards with, some may say, the full knowledge that technology doesn't exist presently to comply with that requirement at the future date. But there is implicit in that statute, in that action by Congress, the requirement that you stop selling automobiles at that time or that we change the statute, one or the other.

The same thing is true with the whole concept of emission standards. You set a particular thing and you utter the challenge and you say, do this or you are going to have to stop discharging or the alternative, do this or we are going to have to take another look at it.

The way the law stands now is the Congress will take another look. I am going to shut up now except to say that implicit in this Tunney and Buckley proposal is a restatement of the most basic dilemma that this committee has ever confronted and continues to confront, and that is the relative merit between the criteria system, the dilusion concept and the emission standards system and the stated standards by statute.

I think it is important that we do this and I think it is appropriate we do it first and I think we had better not waste any time trying to go into these details.

Senator Bentsen. I don't think we ought to get in a positior

where we write a law where we set things that cannot be met. When you talk about the pollution and emissions from automobiles, we are talking about regulating factors where we can get to it and highlight it and understand it. But when you get into these judgmental factors and what is technically feasible for industries across this nation, small and large alike, they are going to escape the review.

Senator Muskie. First of all, I think there is a difference with respect to the automobile, my own feeling was that we were close enough to an understanding of the potential for putting the technology together that I didn't feel we were really asking them to do an impossible job if they stretched themselves. I was willing to take the chance in order to focus public attention on them in such a way that they would stretch themselves.

So I think there is a difference. There is a difference to this extent at least. Here we are faced with an unknown capacity to deal with the technological problems. What troubles me is this: First of all, if we set a standard like this, and it is certainly an attractive one to all of us, we want to be sure that we are setting something that is achievable, that we are not holding up "pie in the sky."

We are saying that by 1980 you are going to be able to swim in water anywhere in this country if this law is enforced. We want to have a pretty good idea that is going to be done. That is the first point.

Secondly, if you are asking that be done, you are asking something that is impossible through any realistic appraisal of the economic impact of that requirement on manufacturers, on jobs and so on. Then what we may be setting in motion is the setting of so many variations to take those conditions into account that the target becomes laughable and meaningless.

You would have to have the various provisions or at least a classification provision such as we began to talk about, both of those are worth exploring, I think, and in terms of what I have just said, maybe the classification system is a better one because then you are not getting involved in ad hoc variances which undermine the integrity of the whole process.

Senator Baker. You might provide for public hearings in areas to see how much you want to clean up this stream and how soon.

Senator Muskie. Even if you get into the classification approach, you run into the difficulties, conceivably run into the difficulties such as we haven't named. We have had a classification system since about 1952 and the classification tends to get set at or near the technological feasibility level, which is far from the Tunney standard, and then tend to freeze at those levels; in other words, it tends to become increasingly difficult to move the standard up.

Senator Buckley. Except you can provide for periodic review.

Senator Muskie. Periodic review tends to get buried.

Senator Bentsen. I am supposed to be presiding right now, but I am concerned that we do not give them something that just isn't feasible and that we promise people something we can't take.

Senator Baker. Why don't you see if you can't get somebody else to preside and stay here with us for a while?

Senator Muskie. Let me say this before you leave. My inclination at the moment is to include this concept in the committee print, because I think it is worth whatever box it may get us into so we can get reactions to it. I have all of these questions that have to be resolved before I would support the concept as part of the legislation we report out, but I think it is a good target to discuss.

Senator Bentsen. It is a great target.

Senator Baker. As far as I have seen this committee, we are tentatively in a fuzzy way working our way into the basic suggestions for the shape of the legislation.

Mr. Billings. I had a conversation with Senator Tunney's staff from California -- Tom Gallagher. In line with all three things that have been said here, one of the usefully designated rivers in the United States as a matter of statutory desires is the national standard for whatever you decided ---

Senator Baker. You didn't have any question on intrastate rivers?

Mr. Billings. No.

Then establish and going back to something that has been discussed before, the condition that some of those rivers are in now and will not be will not achieve the standards and place the burden on the states that take exception to that standard in public hearings where the people have a chance to react as to whether this is the ---

Senator Baker. You designate them and then let the states declassify it.

Mr. Billings. Declassify it after public hearings on the basis that (a) that standard doesn't exist, I mean set up a tight criteria (1) that it doesn't exist, that (2) the kinds of questions Senator Bentsen raises, it can't exist, that this would have a generally adverse effect on the general welfare of the community and place a very high burden on the states to come forward with a statement of why this departure was necessary, and still leaving to the Administrator the authority to overrule that finding if it was a departure from national policy, a policy set forth in the Act.

That would take you away, the concept of variances creates a considerable problem. If you go to declassification of -- to go to variances on different industries, I think it would be a real mess.

Senator Baker. There is one other thing you might want to consider in this and that is before going to this standard and

trying to reach it, you might also consider a bonus in the Federal share to again push the states in that direction so that this is a national standard we want to achieve and therefore sweeten the pot more if you go at this.

Senator Baker. There is an intrinsic inequity, that is the East Huston River may be utterly uncleanable at this point.

Mr. Meyer. But there are large portions of the Hudson River which are probably susceptible to this. I just throw that out as a thing for making it just a little more attractive if you decide this is the way it should go.

One of the pieces of information that has to be found is what is the additional level of investment which is going to be required to achieve this and if it is a significant increase, then maybe an obligation on the part of the Federal Government is it is saying you must do this and saying if it can't be done, they would help with the additional costs.

Mr. Billings. If the estimate of costs is anywhere accurate over the next five years, assuming that the funding of the existing Federal share were available, $33 to $7 billion to implement water quality standards, and that is including some separation of storm and sanitary sewers and some other things that are not presently a part of a Federal program, if you assume that figure, you are just implementing present water quality standards and then you move those communities in some areas to a standard that may be higher, what is the economic impact of a

$40 or $50 billion program on the cities, on the Federal Treasury? I am not even talking about industrial waste, particularly in the problem at St. Louis, We can use that $65 million elsewhere.

Senator Buckley. To keep in mind what Senator Tunney emphasized last week, namely, no one is wedded to a particular date, rather to the concept of fixing a date, I think perhaps we ought to move back a few years so you don't have this doubling up.

Mr. Billings. The same people said five years, they could do the job if they had resources. But if you five them a year to develop, in the first year tell them what they have to do, give them an additional year to do the design work and then give them three years to construct it, that is from an engineering point of view what they could do and they think any longer than that would discourage communities from acting. But whether the money is available is something else.

Senator Muskie. Now they didn't offer to achieve the Tunney standards, they are talking about building waste treatment facilities to the secondary level. Isn't that what you are talking about?

Mr. Billings. No, they said without regard to economics this is what it would take them to build the physical plant, get it installed and get it operating.

Senator Muskie. To do what?

Mr. Billings. To meet whatever effluent standard you set.

Senator Muskie. Whatever? St. Louis is willing to clean

up the Mississippi River to a swimmable quality within five years?

Mr. Billings. They did not say they were able to do that. They said that was an engineering factor, they could not do it economically and they did not say they would be willing to.

Senator Muskie. They have not made any such propositon as to the Tunney concept.

Senator Baker. The Tunney concept is essentially criteria and under the Tunney concept if you could discharge raw sewage into the river and you could still swim in it, then you would have to set that standard. Let me back off to that extent, we are not talking about a pure emission standard.

Senator Muskie. Well, the fish and wildlife standard probably is the purer part of that standard, depending on what kind of fish; if you are talking about trout, you are going to have to get pretty good water.

Senator Baker. Or pretty good trout.

Senator Buckley. In New York it is interpreted as the lowest standard.

Mr. Jorling. The Administration informs us that swimming ranks third behind shellfish production and public drinking supply, then agricultural use, livestock water, various industrial uses and navigation, so that it ranks in the quality spectrum as third.

Mr. Billings. Is that public water supply?

Senator Muskie. Do you mean that the purity of the water to swim in is of a higher quality than that for fish?

Mr. Jorling. In their statement I think it goes to biological parameters rather than chemical and physical.

Senator Muskie. I am talking about the oxygen required. You can swim in water in Maine that you can't get fish in.

Senator Buckley. Can you ingest it?

Senator Muskie. Yes, you can ingest it.

Senator Beall. Did I understand you to say shellfish, if you go to the highest quality, I will point out to you I can eat shellfish out of the Chesapeake Bay and I can swim in the Chesapeake Bay and the Chesapeake Bay is polluted.

Senator Muskie. What we are saying is that the Tunney standard would not be a national standard.

Senator Baker. It is not a stand, it is a criteria.

Senator Muskie. In the 1963 Act the use would be determined by the communities in the areas, the Tunney standard is not a standard, I gather, unless we define it in such a way as to make it that.

Senator Buckley. It is a criteria.

Senator Baker. It is a criteria and I go through this convulsion periodically when we go through these debates.

Senator Beall. To be fair to the people who are doing the job doesn't the uniform national standard have to have more scientific basis?

Senator Baker. If you had a standard, you can't do it this way. You would have to have so many parts per million and such and such. But at least it would get away from the dilution concept.

Mr. Jorling. Senator Beall has suggested a more scientific statement of what the standard is to achieve by requiring that the use designation shall retain the natural functions of the water, that would be the fish and wildlife, the ecosystem is the sum total of the living material and the physical and chemical environment in which it exists, and this would be referenced back to that fish and wildlife at the date before man came in to disrupt it; in other words, if it was a trout stream before man altered it, this would reference it back to a trout stream. If it were a bass stream ---

Senator Muskie. Would we have to promise we would get the trout back there?

Senator Beall. How far back to you go in man's disruptive process?

Mr. Jorling. I think most streams could be calculated on a basis of even 1900 as a reference point.

Senator Muskie. How would you establish what it was in 1900?

Senator Baker. Buckley makes the best point that covers that. You can't. You can't establish what it was in some previous day, but you can say the national objective is swimmable

water, fish and wildlife or whatever, and then go on and try to establish uniform or not uniform standards to reach that.

What I am doing, I am afraid, is just reliving the conflict that we have had between criteria and standards, and we still have not quite resolved it.

Senator Buckley. It is a necessary concept.

Senator Baker. I think you are leading us into the idea that we have to do both, which never quite works out. We have always left the standard settings up to the local planning device and initiative and it may be that is where it belongs. But that is the rationale of this thinking.

I think, Mr. Chairman, if I may try to put my views in, I think I am attracted to the proposal by Senator Tunney and Senator Buckley in that it has popularity and understandability as an expression of a national criteria. I think that it requires flexibility, at least classification, more or less as Leon described it. I think it requires further consideration of the implementation of that criteria either according to local-initiated plans or according to national standards, and we have got to come to terms with that.

That, I guess, is once again all I am going to say. That is the second time I have promised to shut up.

Senator Muskie. I have just one question. Are you for it or against it?

Senator Baker. I will leave that up to you to decide. I

haven't decided.

Senator Muskie. That is what I thought you had said.

Senator Baker. I am for the criteria, I am for the statement of the swimmability or something as a national criteria, but I don't know how to get it there.

Senator Buckley. Might we get this into print in 1970 "blank" on the basis of encouraging input?

Senator Muskie. I really think we should try, at least, to develop the idea further than this before we put it into a print. If it has caused us difficulties in definition that it has up to this point, we can consider the public in the future if we don't give the public some guidance as to what we are talking about, it obviously is not a national standard. It may not even be that. It may be more of a symbol of what we would like to see. That is a great deal of nostalgia in it.

But as a practical measure of what we want to achieve, we really haven't spelled it out. The classification idea, let's just explore that a little, just to talk out loud.

There are two principal ways of achieving classifications. One is setting them in statute, which would be a monumental task. We tried doing that in the main system and we haven't finished the classification job yet which we started in 1950. Every two years the main legislature is asked by the Water Improvement Agency to classify another group of waters and at the beginning that was basically simply identifying the current status.

When I was Governor, we tried to get those classifications up above current status to some quality and it was a very cumbersome thing and it tended to delay achieving fair water quality rather than expedite it, because it was very cumbersome. It is like writing a tariff in the Congress. We had all of the competing local interests, everybody was cleaning everybody else's water up, but when it came to your own backyard, there were some jobs that depended on it so it was very cumbersome and would not work.

I doubt that it would work better here. So I think the legislative route of setting classifications, unless they are so broad and general as to be meaningless, might not be the best way to pursue it, although we might ask the agency to give us some suggestions.

The second one is to get classifications by administration. That takes it pretty much back to where we are in the present law, doesn't it, leaving open all legal questions as to whether classification should be set by the states or the Feleral Government might be tougher in trying to meet the objective, but these are the two routes.

What we are talking about is not a national standard and the way we want to achieve it is by classification and choice there is either some identification in the present law or a legislation setting the classifications. Have I oversimplified it or am I wrong?

Mr. Meyer. In line with what you are saying, in effect, going back to another branch of the law if you go to the classification route, you are talking about an appraisal system of some kind. The law now provides the state to set the new designations. This may be too loose an approach for consideration. Why not a national standard which is the highest and best use achievable by a date certain, whatever will be on that scale of usage, whatever can be achieved through the application of maximum effort by 1980, because you have rivers at totally different kinds of pollution levels and what you do with one may be a tremendous improvement, but not anywhere near the standards achievable with another.

This could be reviewed by the Administrator on submission by the estimated authorities; instead of just choosing uses, you will choose the best possible use that you can achieve and use that listing or maybe even get a better listing of what the order of magnitude of water quality is.

Senator Muskie. Let me turn the thing around to focus upon a problem which was created by the '65 Act. We have gone about this business of setting standards by the states. The Secretary of Interior was involved in putting together guidelines for the setting of standards.

No. 1, I suggested, seemed to be simple enough. He said the only guideline I would suggest to start with is this one that no water shall be graded below its present quality anywhere

in the country, so that we would protect all waters at their present levels of quality. That seemed innocent enough. This seems to make all the sense in the world.

But by what a storm blew up because of what it said to all of the undeveloped areas of the country was that they had to pay the price for water quality, that they could not hope for economic development and growth, that they happen to be in an undeveloped rural area with a pure stream going by and that stream had to be retained in its pristine purity and they just could not accept that because they needed economic growth.

So even that apparently simple standard blew up a storm. If there is that much difficulty in preserving the purity of water which is now pure, you know, the task of turning it around and making those waterways which are now dirty meet a similar standard would be quite a job. Yet there ought to be some way, there ought to be some way in implementing this standard-setting procedure to set a goal of high quality. I don't know what it is.

Mr. Billings. The standards of obscenity at the present time and under the present law, people who want to raise the quality of water have a tremendous burden imposed on them by communities and industries who come in and talk about feasibility and costs and so on. If there is a statutory standard, if there is something that people can focus on and if the departure from that is the burden of people who want to depart from it, if the

burden on departure is the people who can't meet that standard, then you have completely turned the game around.

You may not have changed at all water quality, but you would put the burden on people who want to pollute. They have to come in and say you have got to depart from the standard and why, the ordinary citizen, the conservationist, the fisherman doesn't come in and say, "Gee, we want to raise that."

I think that in itself would be such a complete restructure of the National Water Quality Program even if it meant criticism because of the declassification procedure, you would have given the people who are concerned about water quality a chance.

Senator Muskie. On this question of declassification let me know how many of you have the personal political problems that I face in this connection, that you ought not to be unaware of as you consider any proposal which involves moving down from high water quality because of any consideration, not matter how legitimate it may seem. We were interested in developing a sugar beet culture up in Northern Maine and we had this statutory classification system and once we got the project along to the point where we finally got somebody to agree to build a refinery, it was to be built on a stream which already had a water quality problem and you just could not get the financing, no bank would loan the money without the answer. You know that problem not having been solved in advance and there was no way of solving it in advance, so the legislature temporarily lowered

the classification and the sugar beet refinery, when it was finally built, was built with a closed system that added nothing to the pollution of the water.

But you got all caught up in the fact that this water was already dirty from other causes and so those of us who promoted declassification for the purpose of the sugar beet farmers and then made our case ultimately have been tagged with the other pollution that existed before that date ever since and there is no way. All you have to do is follow the papers as my activities are reported around the country.

They will see me tagged with this thing everywhere in this country for that very reason. So it is a very difficult -- and this is the point I am raising. It is a very difficult political problem to write in the law, setting a standard that then by some political process must be lowered to meet the practical exoduses of a local situation, whether it is economic or something else.

Senator Baker. Is there a distinction there of lowering it as opposed to postponing it?

Senator Muskie. You set your first standards above the present water quality, treating the potential as much as you can and then you keep cranking them up as you go along. That was the objective and that is why we took that approach.

Senator Baker. I would hope in writing this language that it is clear if there is a local provision for declassification,

it is not a permanent declassification, that it is a matter of declassifying only for the time being.

Mr. Billings. We would envision requiring the state and the government submitting a reach of the river for declassificatio that we set a deadline when that stream would come up to the standard and that deadline would also have to be approved.

Senator Muskie. How about this approach, and this may be implicit in what Berry suggested? I get this out of this memorandum, I wonder if there is a way of listing a recognized and accepted way of listing the various levels of water quality beginning with the purest, say, drinkable, and going down to swimming and so on, and using this table as a statutory test of what is required by states and setting standards; in other words, using Berry's ways, requiring them to achieve the highest level on that table for water quality; that is, well, what do we use, feasibility?

Senator Bentsen. I think you have to write in the words "economic feasibility."

Mr. Meyer. The demonstrated best technology.

Mr. Billings. The technology that has been demonstrated. That would get you economic feasibility.

Senator Bentsen. I would want economic feasibility written into it. A while ago you said we were writing it out. I think you have to have that consideration along with the technology.

Senator Muskie. Let me finish my premise here. Included

is they do the best they can do, whatever test you use, within some deadline that we set, but also require them to provide a timetable for achieving the highest quality, or making the case that they cannot achieve that highest level.

I am not setting what it should be here.

Senator Baker. I think we ought to include in the statute language describing these classifications so they are not wholly subjective among the several states.

Senator Muskie. In other words, you have a ladder and by law you are required to take the first step of the ladder within a definite timetable, provide the timetable, the best timetable they can for climbing the whole ladder and then require them to make some case if they can't reach the top of the ladder at all.

Senator Bentsen. And you say the burden of proof is on the violator to prove?

Senator Muskie. No, on the state in presenting the standards

Senator Bentsen. What if the situation is not technically feasible or not economically feasible? The point is I want to see the burden of proof on this person to prove that it is not technically feasible.

Senator Muskie. Let me raise the question that is troublesome here. In some cases, you know, something that is impossible may need to be required, that is something that is not economically or technologically feasible may have to be required.

Let me ask you this. There are accepted classifications,

for instance, the main law has what, four or five? I don't know how standard those are across the country. Could we get those or others that may be better? I don't have any particular thing on the main standards. They have not done that much for us over the years, but some such four or five classifications, and we could look at them to see whether or not this gives us something to hang our hats on. In other words, the objective is to force states as far up that ladder as far as it is reasonable from the point of view of even the most ardent conservationist, to force them to go.

Mr. Billings. Two questions: (a) is implicit in that the preservation of water quality?

Senator Muskie. You mean nondegradation? Nondegradation ought to be in it, but the exception to it now, of course, am I right in this, is that in places where you have economic development growth, you require the latest available technology?

Mr. Billings. Basically it is the general welfare exception, but it is the best available technology.

May I suggest an option to that? It may be that getting to the point you were just making to Senator Bentsen, that there are certain places where you have to reject economics, there may be that certain rivers and certain waters in the nation that you want to have at a higher use than is determined to be best achieved. In other words, it may be that for certain overwhelming national reasons we may want to have the Potomac

River swimmable when the States of Maryland and Virginia and Pennsylvania and so on don't think it can be done. Should there be a procedure for the Administrator in the beginning of all this to determine whether or not there are, in fact, rivers that (a) should not be degraded at all, and (b) should be brought up to the highest possible standard, so that you have some national policy direction in place of nondegradation?

Senator Muskie. In other words, what you are saying is should the national policy say to some areas of the country, "We don't want you to develop economically"?

Mr. Jordan. We do that in the staff for new performance standards for new sources, but to have a uniform standard for every effluent would have to be extremely high in the case of a small receiving body of water. It would be unrealistically high for a large one.

Senator Baker. What Jim is saying, the element of criteria, what I am talking about is pure emission standards and that doesn't make a bit of difference whether it is a big river or little river if you have national emission standards. I would give some time for compliance, but that is all.

Senator Muskie. What are you saying? No effluent discharge, pure effluent discharge?

Senator Baker. What I am saying is a reasonable effluent discharge, but it is the same everywhere.

Senator Beall. Who sets the standards?

Senator Baker. This is a whole brand-new field. What I say in suggesting this alternative and laying it on the table is that we, in effect, repeal all of our water statutes and start over from scratch. As long as they are uniform, I really don't care how they are established and as long as there is some flexibility and reviewability, those are the judgmental factors.

Mr. Jordan. It sounds like the standards we posed on vessels in the '70s, whereas where we said there will be a uniform national standard in sanitation devices, but if the states wanted to do anything else, they could prohibit the discharge entirely. So you had two standards, you could not locate there unless you could be approved by the district.

Senator Baker. The state could say, "We don't even want that much." That is the only standard.

Senator Muskie. The difference is, of course, the point that you made that it might be people across the state, if the waterway were large enough, and it would absorb without even hurting water for fish and let alone swimmability, I think the effluent standard, if it isn't a standard of purity, if the standard is technologically achievable, sensible, it has to relate to what is technologically feasible or the impact on the water.

If it is technological feasibility, then the discharge presumably could be the same although it would seem to me that the size of the plant might have an effect as well. But assuming

that there would be no variability because of the size of the plant, nevertheless theimpact upon a waterway could depend upon the size of the waterway, its flow, and have an effect upon what the community thinks ought to be the uses permitted.

Senator Baker. If I may for a moment, Mr. Chairman, I might suggest that gets us back into water quality criteria and the whole range of subjective considerations on the permissible extent of that emission, the highest and best use, the esthetic quality and the whole thing. But if we turn around and say, instead, our objective is swimmable water and to obtain that objective we are going to ignore the size of the stream, we are going to ignore dilution factors, we are going to ignore everything except these national standards for emissions, and the only thing we reserve beyond that is the right to say you can't discharge that off and therefore it is going to accomplish the national objective by requiring these emission standards within the timeframes that appear feasible.

Mr. Billings. It might not.

Senator Baker. That is the risk we take and I think that risk is probably less than the series of risks we take in trying to decide what stream ought to be what purity.

Mr. Billings. The AEC had one uniform emission standard in radiation for all of its plants and they never took into account the question of what happens when you put 11 plants on Lake Michigan and when this issue was finally raised, they

had to do one of two things: Lower all of their emissions to zero or have a reduction in all of the plants so that the total did not exceed the accepted level for water.

Senator Baker. You are talking about thermal pollution?

Mr. Billings. I am talking about radiation.

Senator Baker. They are down to zero. They learned that they were wrong. I expect we will probably do the same thing. But I have long felt that we in virtually every consideration we make in this committee, we tend to confuse the two concepts, standards, on the one hand, and criteria, on the other, and it is infinitely simpler a process and more equitable to go to a standards system than it is to continue with any aspect of the criteria system except stating the national objective and reserving the right to require no pollution at all.

Then the Hudson ship channel or the Hudson River would clean up according to the product of the uniform requirement that a refinery in either place discharge effluents of a certain type and a certain character not above a certain level, which is ultimate equity involved, and I think the most efficient way to approach it.

Senator Baker. I think the only thing you can do is deny the right to discharge, because if you go into the carrot and the stick controversy or if you go into any aspect of the dilution controversy, you are right back in the fire again. You have a whole range of variables that is impossible to control or

or describe satisfactorily by statute.

I think the only thing we can do is set a national standard, swimmability, and set a national date, and frankly -- and say this without any truce of cynicism -- the principal reason for it would be because the public understands it, it will be popular and appealing and mobilize the public into the kind of sacrifices that are necessary to do these kinds of things.

Senator Muskie. Let me raise a couple of questions, much as I would like to get away from criteria and standards, I don't think it is so much we confuse the two as that it is a practical matter that it becomes difficult to avoid them. You say the effluents permitted shall be of such a high order that in all cases the water will be at least swimmable or better. That means that you have got to set the effluent standards in accordance with some evaluation of the dilution factor because the volumes, if the plant is bigger, the volume is going to be greater and its impact upon the receiving water is greater; and if the receiving water is small, the impact of the effluents is going to be different.

If your standard is one of purity, then it doesn't matter how much you pour out. You are going to have swimmability. The swimmability is related to what is poured in the waterway and that has to do with volume and parts per million, and then you can't get away from taking that into consideration.

I don't see how you can.

Senator Baker. Let's skip it and make it "national standards" and forget the swimmability, but you will get that as a byproduct of the national standards.

Mr. Jordan. I am not sure you will, because it assumes that all water pollution is from a point source and, secondly, a source that the Federal Government has knowledge of and that the Federal Government is capable of setting an effluent standard for. I think those elements of Federal knowledge and Federal access to effluent sources is true, but if we try to achieve these for national industry, national scop industries, and then, secondly, we try to recognize a difference in the kinds of pollution that exists. We have a situation where some pollutants impact water differently than others.

We have tried to classify those as "nutrient pollutants," those which accelerate the eutrophication. We have established a framework for those which is basically controlled by the states, because they are the ones which can control, they are the ones that control the amount of units we are reaching of the living organisms.

Then distinguish that category of pollutants from those which are generated by industry, which we have established basically what you have suggested in this print through the dual Federal effluent standard-setting authorities distinct from the new sources, which are toxic substances and non-nutrient pollutants, where without respect to receiving water quality

we say the Federal Government has the obligation to set a uniform standard for those because their impact does not differ from receiving water like nutrients, like heat does.

So we in a sense attempted to distinguish between the effects of pollutants on receiving waters and set effluent standards at the national level for those which are in a sense a uniform effect, those which do not impact water quality differently in one area and another, and those which do affect the waters differently depending on the geography and the physical characteristics of the water.

So I am not sure that just by setting a uniform system of national effluent standards you will ever get at pollution, because so much of it is not plant source and is not at all able to be regulated by the Federal Government.

Senator Muskie. Another point, pursuing your assumption with that approach to swimmability, is that you know there is only one industrial source of pollution, but on industrial rivers there are many, and when you try to control the thing by setting the effluents by kind, by industry, if there is in a particular stretch of water a number of such industries, obviously the effect upon the quality of water is going to be different than if there were one. And so to relate your effluent standard at this joint as to what you hope to achieve, you have got to take into account the possibility, the multiplicity of different kinds of sources.

Senator Baker. I will give you the other side of that argument. The City of Memphis for a long time discharged all of its raw sewage in the Memphis River just because the receiving waters had such a high volume that they could meet the national stnadards without doing a thing.

Frankly, it is just not right. I don't care how you slice it, it ought not to be permitted that way.

Senator Muskie. Let me suggest that on the basis of the discussion this morning we ask the staff to develop some alternatives for further discussion and then when we come back this afternoon, we try to turn to the rest of the agenda and cover as much of those as we can. I think we have had a useful program of ideas here and thoughts, and we will have to build on them. I don't have any hard and fast rules.

I hope we can build something on these discussions.

Senator Eagleton. Mr. Chairman, could I raise two points before we adjourn? I have some amendments. They are not amendments, they don't get to that dignified level. But I have some ideas I would like to see tentatively reflected in the committee print. These are on the general subject of agricultural pollution.

Senator Muskie. Why don't we continue until the vote, which will be in about 20 minutes.

Senator Eagleton. I am just trying to pass these out now.

Senator Baker. Would you please include some version of a

simple national standards.

Mr. Billings. Mr. Chairman, we may be able to do that for the next executive session. We should be able to have all three or four of these proposals in some kind of checkoff.

Senator Muskie. When is the next executive session?

Mr. Billings. The 18th and then we have the 22nd, 23rd and 24th.

Senator Eagleton. It is our thought to have by the 18th a print?

Senator Muskie. I don't see how we can have a public print on that question at this point.

Mr. Billings. I would think this language and all the alternatives they should probably be in language the members can have.

Senator Eagleton. When will we have what is called the committee print?

Mr. Billings. Tomorrow morning we will have it absent -- having excised from it some of the areas in which there is no clear view as to where we are going.

Senator Baker. I don't think there is any need to have one that quick.

Senator Muskie. Let's wait and see until we are through this afternoon, to see how much we have got that we are ready to expose to public view. All we have touched thus far we have not reached agreement on. So let's see where we stand at the end of

the afternoon on the question of whether or not we can put together a print that is public.

I doubt very much that we are going to be that far along.

Senator Eagleton. These are some ideas on agricultural pollution that I sometime would like to see reflected in some tentative draft print, and they are excellent ideas, I might add.

The first two pages are a summary. And then the substantive amendments are appended thereto.

Senator Muskie. Why don't you go over those first two pages right now.

Senator Eagleton. The second point I would like to raise is one we have to face sooner or later by June 30th, assuming, which seems to be obvious, that there is not going to be a bill that emerges from this committee for the Senate, that is agreed to in conference and signed by the 30th of June, what are we going to do about the law that expires on the 30th of June?

Senator Muskie. I think we have no choice but to put in motion an authorization.

Mr. Billings. The House will on an extension calendar on the 21st probably put through an extension for six months, as I am informed the House doesn't really want to act on a bill this year at all. They are presently having oversight on water pollution, they will not get into their legislative hearings until very late this month or next month.

They could not possibly have a bill before the August recess

and doubt they could have one before adjournment.

Now if this committee wants to have a bill, an extension of six months would kill it; if we had an extension of three months, say, to October 1, that would keep some pressure on the House to act.

Senator Muskie. I think we ought to begin talking with the House side on this. Without their action, we can't finish a bill by July 1 and I thinkwe ought to press as hard as we can to get as far along as we can in order to keep pressure on them. The farther along our bill goes, the greater the pressure on them also.

As I gather that committee is somewhat on the defensive as a result of the fact that over the years we have produced most of the legislation and, secondly, that they had better look reality in the eye and try and get a three months' extension. I think you have no choice.

Mr. Billings. If the committee goes for a three months' extension, would you want to go at 25 percent of the level authorized for 1971 or 25 percent of the level proposed for 1972? In other words ---

Senator Muskie. I would say the new -- that is, the minimum -- I think we would agree to. Let's initiate those discussions and tell them we will be glad to help them with their legislation.

Mr. Billings. Senator Baker has suggested that they pass over a bill extending the bill for six months and we add our

bill to it and send it back.

Senator Muskie. Go ahead on yours, Tom.

Senator Eagleton. I will be brief, Mr. Chairman. There are six amendments and the general purpose is to assure that these special problems of controlling agricultural and rural water pollution are adequately and explicitly dealt with. I think this is one of the toughest problems in the whole area of pollution. We had hearings in Kansas City, Senator Buckley was there, and it is in the present EPA structure, and not intended as criticism, the whole concentration, and quite obviously so is on industrial pollution. They have experts on chemical companies and steel companies, et cetera, and there is very little input or consideration given to the general agricultural pollution problems.

Point source agricultural pollution is perhaps manageable by the feedlots, et cetera, and we heard interesting testimony as to some feedlots are being pretty well handled at the present time and perhaps others could come under that idea.

As to general agricultural runoff and wastes, it almost defies any solution that comes to my mind. But in any event it is one that has to be at least recognized within the confines of any new water bill. So I set forth six amendments that -- six ideas that I would like to see at least tentatively reflected in the committee print, because the last print that I saw, whatever that thing is called, is very vague, very amorphous,

and very loose on agricultural pollution and in some respects rather frightening. It might be deemed frightening to farmers in the sense that it says, "Thou shalt not pollute" pretty firmly and you violate Federal law if you do.

Senator Muskie. The committee print talks about including agricultural runoff as a part of implementation plans.

Senator Eagleton. Without defining it or narrowing it, et cetera. So Amendment 1 calls for some research into the program of agricultural pollution, and the rest are research-oriented or demonstration-type oriented, when you get down to 4 on the second page in the summary sheet.

Senator Muskie. Are the demonstrations grants 100 percent federally financed?

Mr. Maynard. It is not different, Mr. Chairman, from the demonstration project authority that already exists. We didn't specify costs.

Mr. Billings. There are limits on grants, 100 percent contracts, 75 percent grants not to exceed $1.5 million.

Mr. Maynard. These are cast within the demonstration project authority that presently exists, Leon said.

Senator Eagleton. It is an endeavor, perhaps an imperfect one. It is an endeavor to bring the question of agricultural pollution into the same general recognition which has existed previously to industrial pollution. But I think we had to have something in a rough draft print somewhere along the line that

focuses on this subject.

Senator Baker. Is there any possibility we can develop something on strip mine impact on water pollution?

Mr. Billings. Yes, sir. In fact, there is a study on that which recommends $6 billion of expenditure control.

Senator Baker. Strip and acid mines both?

Mr. Meyer. There is in the Act, in the 1970 edition of the Act, a national mine drainage program which has been very, very slow in funding.

Senator Bentsen. Mr. Chairman, I think he highlights a very difficult problem and I am certainly sympathetic to this summary.

Senator Muskie. We will have the legislative counsel go over that.

The staff has prepared language here, suggested language dealing with the nonpoint of source controls -- I guess the pages are in the wrong order -- and you may want to take this with you and look at it.

Senator Bentsen. May I bring up something on Section 303, page 18? It will be (j) under 330. We get to the question of the question of wells, controls over, extraction from and disposal in wells.

Mr. Billings. This is going to be removed from that section and will be covered by this new language we have just distributed.

Senator Bentsen. I want to know what kind of wells we are talking about and talking about ---

Mr. Billings. I am sure it is not clarified adequately, but we have removed it from that section because of the implications of that section.

Senator Muskie. Do you have new language for that section?

Mr. Billings. All of those areas, the shadow areas, agricultural activities, mining, construction activities, extraction materials, salt water intrusion and so on are covered in this new section in order to separate the nonpoint sources from this, which is primarily and will be the only point source controls.

Senator Muskie. As long as we are on this, this was the section item of the agenda, implementation plans.

Mr. Billings. Apparently there has been another amendment offered, that vote may not come in 20 minutes and there may be votes about every 20 minutes.

Senator Muskie. Do you want to go through Section 303 while we are waiting, and I suggest we recess at 12:30 or at vote, whichever is earlier.

Senator Bentsen. I would like to highlight this point and get clarification language on it. Just glancing at what you have given us, I don't see that it does.

Mr. Billings. You will note in subsection (a) that there is a deadline on the implementation of water quality standards for three years. This provision would be -- isn't physically

related to whatever the committee decides in the preceeding section essentially being in abeyance at this time.

Paragraph (b) is the requirement for defining specific effluents limitations; paragraph (c), land use, strip mining and other controls which would be needed and removed to the other section which we are discussing, the monitoring requirements are the same as the clean air amendments requiring monitoring and so on to be a part of the plan, the free construction review procedure is the same as the bill relates to the establishment of new sources of pollution, intergovernmental cooperation is basically boilerplate, the adequacy of personnel and funding.

Senator Muskie. Let's begin at the beginning. 303(1) provides that an implementation plan must be adopted and submitted by the states within nine months after the date of the national legislation.

Now the purpose of the implementation plan is to present the state's program for meeting the water quality standards we set before, and which has been the subject of discussion.

Then the next four months the Administrator must approve or disapprove the plan. Now let's go down through (a), (b), (c) and (d) and take out those things that you have taken out with your new language here. Now I assume this new language doesn't go in here.

Now what is taken out? Is (a) -- (a) is retained?

Mr. Billings. Under (a) the staff has recommended that it

be retained, but the number of years be eliminated until some decision was made on what water quality standards are.

Senator Muskie. Just put a question mark on 3.

Senator Buckley. On these nine months' and four months' time limits have we input as to the feasibility of meeting those goals? New York State advises me it took two years to do that.

Mr. Billings. Senator Buckley, hopefully the staff -- Tom and I will be visiting the states in the Southwest and West and New England and New York, and we will be able to obtain from their reaction to this meeting with the staff at the staff level.

Senator Muskie. So there is a question mark on "nine months."

Mr. Billings. For the purpose of discussion we will keep that in there.

Senator Muskie. Let's just make that clear we have not decided on it. (B) is retained?

Mr. Billings. Yes.

Senator Muskie. This includes effluent limitations, schedules and time limits for compliance?

Mr. Billings. This is the heart of the limitation.

Senator Muskie. And the standards must be at least as strict as any applicable prohibition, what are those sections?

Mr. Billings. Those are the two national standards for toxic pollutants and the national standards for the pollutants which do not or are foreign to receiving waters.

Senator Muskie. (C) is out.

Mr. Billings. (D), monitoring provisions, is in.

Senator Bentsen. Let me ask about (c), is that moved to the other section or deleted?

Mr. Billings. As it exists, it is deleted in its entirety and an expanded form will be put in.

Senator Muskie. (D)?

Mr. Billings (D) is in, it is monitoring data.

Senator Muskie. (E).

Mr. Billings. (E) is in. This relates to the new source performance standards.

Senator Muskie. So that stays in. (F)?

Mr. Fillings. Intergovernmental cooperation is in.

Mr. Jorling. May I raise a point there, Senator Tunney's amendment has a suggestion there that adds specifically the concept for the purposes of developing river basin plans.

Senator Muskie. (G).

Mr. Billings. (G) is in, necessary funding and personnel.

Senator Muskie. (H).

Mr. Billings. (H), the revision is in.

Senator Muskie. (I).

Mr. Billings. I think we should leave it in. We may as well. (J) is out.

Senator Muskie. (J)is out. That is as to well problems.

Mr. Billings. Extraction from and disposal in wells.

Senator Bentsen. Obviously we have not had those kinds of controls. I just want to know how far the controls go.

Senator Muskie. (K).

Mr. Billings. (K) is in.

Senator Muskie. (L).

Mr. Billings. (K) is a rather important policy. There is a massive amount of sludge these pollution control facilities are going to generate and where they would be dumped after they are taken out of the rivers. The reason I mention this specifically is that this gets us into the question of ocean dumping in sort of a backdoor way.

Senator Baker. That is like that agricultural runoff is in the land use.

Mr. Billings. (L) is out. (L) is going into that other section. (M) is in.

3 is boilerplate and 4 is boilerplate.

Section 304 is also the basic approval language.

Senator Muskie. Shall we recess until two o'clock?

(Whereupon, at 12:20 p.m. the subcommittee recessed, to reconvene at 2 p.m. of the same day.)

AFTER RECESS

(The committee reconvened at 2:00 p.m., Senator Edmund S. Muskie presiding.)

Senator Muskie. The committee will be in order.

We will start with No. 4, new source standards, page 19. We will see if we can actually begin to nail down some definite things so we have a sense of accomplishment.

This is at the bottom of the page, standards for performance for new stationary sources.

Mr. Billings. Mr. Chairman, this is modeled after the language of the Clean Air Bill. I would like to call your attention to a couple of significant departures.

Senator Muskie. Why don't you just read it out loud.

Mr. Billings. "The term 'standard of performance' means a standard for the discharge of pollutants which reflects the degree of effluent reduction achievable through the mix of the best system of waste control, including,where practicable, a standard permitting no discharge, which, taking into account the cost of achieving such reduction, the Administrator determines has been adequately demonstrated.

"The term 'new source' means any stationary source, the construction or modification of which is commenced after the publication of regulations, or, if earlier, proposed regulations prescribing a standard of performance under the section which will be applicable to such source.

"The term 'stationary source' means new building, structure, facility or installation whihh discharges or may discharge any water pollutant.

"The term 'owner or operator' means any person who owns, leases, operates, controls, or supervises a stationary source.

"The Administrator shall, within 90 days after the date of enactment of the National Water Quality Standards Act of 1971, publish, and from time to time thereafter shall revise, a list of categories of stationary sources, which such list shall, at the minimum, include:"

Senator Muskie. Does this include all of them?

Mr. Billings. I don't know if anything is left out. Waste treatment points are not listed.

"(B) Within 60 days after the inclusion of a category of staionary sources in a list under subparagraph (A), the Administrator shall propose regulations, establishing Federal standards of performance for new sources within such category. The Administrator shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within 60 days after such publication, such standards with such modifications as he deems appropriate. The Administrator may from time to time revise such standards following the procedure required by this subsection of promulgation of such standards.

"Standards of performance or revisions thereof shall

become effective upon promulgation.

"The Administrator may distinguish among classes, types and sizes within categories of new sources for the purpose of establishing such standards.

"The Administrator shall, from time to time, issue information on pollution control techniques, process changes and other waste control measures which may be applicable to categories of new sources and subject to the provisions of this section.

"The provisions of this section shall apply to any new source owned or operated by the United States.

"Each state may develop and submit to the Administrator a procedure for implementing and enforcing standards of performance for new sources located in such states. If the Administrator finds the state procedure is adequate, he shall delegate to such state any authority he has under this Act to implement and enforce such standards, except with respect to new sources owned or operated by the United States.

"Nothing in this subsection shall prohibit the Administrator from enforcing, at any time, any applicable standard of performance under this section.

"After the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source."

Senator Baker. What about preemption?

Senator Muskie. That is (C)(1).

Mr. Billings. On page 45, Senator Baker. Section 510:

"Nothing in this Act shall preclude or deny the right of any state or political subdivision thereof to adopt or enforce, (1) any standard of limitation respecting effluent of water pollutants or combinations of such pollutants; or (2) any requirement respecting control or abatement of water pollution; except that if an effluent standard, or limitation or prohibition, or standard of performance is in effect under an applicable implementation plan or under Section 305, Section 306 or Section 307 of this Act, such state or political subdivision may not adopt or enforce any effluent standard, or limitation or prohibition or standard of performance which is less stringent than the standard of limitation or prohibition, or standard of performance under such plan or section."

Senator Baker. The same problem is whether or not we want to do this.

Mr. Billings. One possibility is you have a standard of performance and the technology has changed later, but the standard hasn't changed. The Administrator hasn't gotten around to updating the requirements. Secondly is that the state may want to prohibit location. I guess he could do it anyway, so I guess the only real question is whether or not technology has changed and the standard hasn't.

Senator Baker. How could you prohibit location?

Senator Muskie. We have a law in Maine.

Mr. Jorling. The laundry list comes for two reasons: (1) Under the air pollution section they said they want to do it for 19 categories.

Mr. Meyer. What is to prevent them from starting with those five?

Mr. Jorling. The minimum must include it.

Mr. Meyer. They can say, "We are going to do this."

Senator Muskie. They have got 90 days to do it.

Mr. Jorling. The other reason is that they have under contract the development of new source standards of performance for each of these.

Mr. Meyer. They have to do them all.

Mr. Jorling. They are doing them all. This is just telling them to go ahead.

Senator Muskie. How are the standards expressed?

Mr. Jorling. I am not sure I can answer that. Dick?

Mr. Grundy. They are under contract going out to the private firms which specialize in each of these fields to define (1) the average degree of treatment that is being applied by that industry, and also (2) the state of the art for control and then define it in terms of two things: One would be performance in terms of allowing for operation procedures, and the other would be for purely treatment standards which define what was capable by treatment alone.

It may be secondary treatment or chemical rather than biological treatment.

Senator Baker. Instead of by constituent. They are doing the process by process so they can show for a given process within an industry what its potential will be and what an appropriate standard would be for it that reflected the state of the art in control.

This was done for two purposes: (1) to set the minimum requirements under the Refuge Act permit system; and (2) to develop standards for new sources.

So the contracts in these areas are to deal with both aspects of enforcement.

Senator Muskie. Do they have a capacity for determining what the best system of waste control is?

Senator Baker. All of these are being done under contract with consulting engineering firms and industry groups on the outside. They are not being done in-house.

Senator Muskie. To what extent is the technology inadequate in terms of reasonable water quality?

Mr. Grundy. This we won't know until the results of the contracts come in. They are not due in until July of this year.

Mr. Billings. We express a certain amount of information on the basis that two dates of hearings were held on the availability of technology.

Mr. Grundy. For some industries it will be adequate, but

the petrochemical industry, for example, where there is a serious question of whether the technology of treatment is adequate.

Mr. Billings. In New Orleans it is a matter of regulating input and process. Treatment is only one alternative.

Senator Muskie. Shouldn't we make it clear here we are talking about the best system of control, not only about treatment, but about the processes themselves?

Mr. Billings. Defining this thing as a performance standard is to set forth to attain an effluent quality not in the way they have to do it, so that if treatment is the best way to go, fine. If process change is the best way to go, that is fine, too.

Senator Muskie. I understand. But I just want to make it clear in the language. I am not sure that the language makes it clear that we are talking not about the best system of waste control for the effluent, whatever it is, but we are talking about reducing the effluent in the course of the process itself as well.

Mr. Grundy. There are actually three. You can select the process, or select one where the operating procedures are for an opportunity for control and also the one where the treatment offers an opportunity for control.

Senator Muskie. I would like to make sure that the language is clear. I think it ought to be rather explicit, these three points, in setting performance standards.

Mr. Jorling. The cost here is that when he looks at the technology, either as a process change matter or as a control of effluent matter, he would consider the cost of either of those or both and make a reasonable judgment -- because of the cost factor being adequately demonstrated -- that the reasonableness test is the same test that we have got.

So the question Senator Muskie raises, I think we have to be cautious. If we changed this, we are indirectly saying that, unless we state otherwise somewhere, that we are choosing a different test than we had in the air section.

Senator Muskie. What does the test of the air bill say?

Mr. Jorling. Meet standards for emissions of air pollutants which reflect a degree of limitation achievable through the application of the best system of reduction, which is taking into account the cost of achieving such reduction, the Administrator determines it has been adequately demonstrated.

The only change that the staff print here includes is the insertion of the clause "including, where practical, a standard of permitting no discharge," which reflects the testimony that we received. This is to make it clear that that is included in a new source standard of performance, that level of control.

Mr. Billings. The staff is not satisfied with the language of "no discharge." We are trying to define that to express the concept.

Mr. Jorling. The Administration had language that said

"closed cycle." We have asked several groups to furnish us definitions of what is meant by "closed cycle" production methods.

Senator Muskie. It seems to me if technology is available, unless it is only available in a test pilot sense or laboratory sense, that if the technology is available, it has been produced and is available on the marketplace. If it is, should you crank in an economic feasibility test?

If technology is available in the sense that it is on the market, should it be required?

Senator Buckley. It might be applicable to one plant and theoretically applicable to another plant. It might be on the market, but it might be unduly expensive for one particular use.

Senator Muskie. Even putting it in those terms, we are talking about a new plant, if it is going to be discharging for its life, whatever it is, shouldn't we be tough?

Senator Baker. Economically feasible can be so in any given instant and not so in another, depending on makret conditions, among other things.

Mr. Billings. The cost question was inserted in the conference.

Senator Muskie. This is House language?

Mr. Billings. Yes.

Senator Baker. It makes one tempt to operate in favor of an ad hoc determination on an individual basis, as the saying goes.

Senator Muskie. What was the Senate language last time?

Mr. Billings. I don't think we have the exact language here, but it was to the effect that technology had been adequately demonstrated. Our theory was if the technology existed, that that meant it was economically feasible for somebody to show that a little bit more.

In a conversation with a corporate executive, he pointed out that they put in a closed cycle pulp and paper plant and this cost them 10 percent of the net plant investment to do it. I asked if that would be adequately demonstrating the technology. He said it would meet the definition.

He said the only trouble was he was the only one who had done it. So the argument by other people is as to whether or not that was adequately demonstrated.

Senator Baker. I think that is about as good as we can do. What we have done, it seems to me, in 305, is leave it up to the Administrator to decide. As long as the determination is subjective and varying, as it will be from time to time, somebody has got to decide. We can't do it in legislative language.

Mr. Jorling. The language that the Senate passed on this point, "Such standard shall reflect the greatest degree of emission control which the Secretary determines to be achievable through the application of the latest available control technology, processes, operating methods or other alternatives."

So there was no reference to cost.

Senator Muskie. I still prefer that.

Mr. Meyer. That gets us in all the issues you have raised before.

Senator Muskie. Exactly.

Why don't I ask the staff to substitute the Senate language and bring it before us the next time, to report language, to define "availability" so we can look at it, either for possible inclusion in the statutory language or treatment in the same way.

I think when you are talking about new plants, this is very similar to the new car thing. We didn't talk about economic feasibility in setting emission standards for new cars. Henry Ford has predicted it will cost $1,000 a car.

If we have had economic feasibility testing on new cars, what would be the answer?

Senator Buckley. One thing that impressed me in the hearings was to take the petro industry, you have an infinite variety of products being made. You might have something that was technologically improvable for something that doesn't quite fit. I am afraid you might try to place this particular mode in a slightly different situation.

Senator Muskie. If they are that close and they are forced to stretch the art, fine.

You are going to have those margin cases always. If you

resolve them by testing economic feasibility, I am afraid you are just going to result in a low standard.

Economic feasibility changes so. The creeping inflation we have had for 200 years, what is economically feasible today, ten years from now, looking back, say, "Why didn't we do it then?"

Mr. Jorling. We did have this problem that Senator Buckley raises in the air bill; that is, providing the Administrator may distinguish among classes, types, sizes within categories of new sources for purposes of establishing such standards.

If you had a refinery operation producing one kind of petrochemical and you had another one where the same technology is not applicable, then this would provide a set of different standards for each of those two petrochemical productions.

So that exists also in the Air Act, to give him some flexibility in the application within categories.

Senator Baker. The Minister of Environment in England has almost total administrative power to license construction plants to provide exactly effluent standards for individual operations, different locations and at different times.

I am sure the staff has a good reading on how they structured their statute and how that operates. But it ought to be something we would look into.

Mr. Grundy. Their act goes back to the Alkaline Act of 1898 in which they set up industry advisory groups which defined

the state of the art. They review these every seven years and issue an annual permit where the industry has to not only show whether they have the standard implemented or t-ey are in the process of implementing it, everybody has to come up to performance within seven years, whether you are a new or existing source.

At the end of that period the industry will meet again and they will redefine the plan for implementation in the next seven years. The recognition inherent in this system is obsolescence. Some facilities may have to go out of existence, but they also have an added factor. That is the industry polices itself, because if a member doesn't conform, then the whole industry ends up being affected as a whole.

The industry will even pull boycotts on the other segment of the industry that isn't coming up to snuff.

Senator Muskie. The availability incorporates to a degree an economic test. Is it available, or isn't it?

Mr. Meyer. There is more detail language along this in the Air Bill also as to what was meant by "modification."

Mr. Billings. We had a definition of "modification." We also had a definition of "construction." We lost both of those in conference.

Senator Muskie. Let's haul those back in here and look at the Senate language.

Mr. Jorling. We gained a definition of "modification" in the conference. Modification means any physical changing or

changing in the method of operation or stationary source which increases the amount of pollutant emitted by such source.

Mr. Meyer. Which excludes the question you raised.

Mr. Billings. I think we will insert that back in.

Senator Muskie. With all rights reserved with respect to final action on these things, without objection we will do that.

On page 20, any questions about anything on page 20? I guess (B) is procedure.

On page 21, the Administrator shall from time to time issue information on pollution control as to process changes and other waste control measures which may be applicable to categories of new sources and water pollution subject to the provisions of this Act.

Does that mean that all of those control techniques -- is that control techniques and process changes?

Mr. Billings. There should be a comma after that.

Senator Muskie. Waste control measures, all of those must meet the standards that we have already talked about.

Mr. Jorling. "The water pollutants" should be stricken. The last line of that paragraph. The reason that was brought in is in the Air Bill we had some effluent standard-setting authority for the Administrator for what we had in the Senate-passed bill called "selected pollutant agents." So that is no longer applicable here.

So that should be stricken.

Mr. Billings. I think we should point out that technique changes and control measures would be those that achieve the discharges that were required by the Act.

Senator Muskie. Why couldn't you put it in here? Is there anything more on that?

On our agenda that is Item 4. I am ready to turn to Item 5, pollutant effluent standards, also on page 21.

Why don't we read this.

Mr. Billings. "For the purpose of establishing a prohibition or effluent standard under this section, the Administrator shall, within 90 days, after the date of enactment of the National Water Quality Standards Act of 1971, publish, and shall from time to time thereafter revise a list which includes each toxic water pollutant or combination of such pollutants, which such list, at the minimum, shall contain the following pollutants:"

Senator Muskie. That language "From time to time thereafter," do we have similar language in the previous one?

Mr. Jorling. It is under (B)(1)(2): "And from time to time thereafter shall revise . . ."

Senator Muskie. That is revise the list of categories. I am talking about revising the standard.

Mr. Jorling. Page 20 at the bottom.

Senator Baker. Don't you agree that ought to be "shall"?

Senator Muskie. There should be language in there to indicate that he will try to stay on top of technological improvements

Mr. Billings. We will work something out -- "as technology improves, he shall . . ."

Senator Baker. Why do you have all of these items in here? Where is the source material that shows that silver is a toxic material?

Mr. Jorling. The Administration supplied a report listing substances in the Water Quality Act as pollutants, and the ones with asterisks are listed in their report have toxic substances. The others are in here -- cobalt, chromium, barium, fluoride containing silver and tin, and uranium are metals which the staff has searched for literature on and found a toxic effect that meets the definition.

That is 1500 parts per million. The definition appears on page 40 of the print.

At that level of concentration in living tissue there are toxic effects from all of the ones listed. There has been some comment raised by some of the people who have been reviewing this that we should not use an absolute concentration of 15 parts per million in living tissue as the classification point for toxic substances as opposed to nontoxic substances.

My personal feeling is it is a good idea, because it tells the people that if the research reveals a toxic effect at that level, then it falls into this scheme of regulation. If not, it falls into a different scheme, rather than leave them at the subjective point where the Administrator makes the judgment that

this is a toxic. It does give some precision to the definition.

Senator Baker. This is based on the concentration in living tissue rather than concentration in water?

Mr. Jorling. That's right.

Senator Baker. It doesn't take into account, however, how difficult it is for living tissue to absorb this staff.

Mr. Jorling. I think that is probably accurate.

Senator Baker. Silver is almost totally absent in human tissue.

Mr. Jorling. It is one of those substances that we know, if it reaches that concentration in tissue, provides these effects, then it should be regulated pursuant to this section as set forth.

Mr. Westman. There have been example in literature where exposure to silver has caused people -- it is mostly that people whose skin has turned green, and eyeballs have turned blue and so forth.

Senator Baker. That is very impressive. (Laughter)

Senator Buckley. Is it possible to prohibit any part of these things from going out in waste waters under certain circumstances, some of the stuff is going to escape.

Senator Baker. That is the point I was working up to, if you will let me interrupt. It seems to me we have an entirely different approach in this list in toxic substances than we did in the Air Bill, because in the Air Bill the rationale was any

amount was harmful.

Mr. Billings. Any amount that got out and couldn't be controlled.

Senator Baker. For all practical purposes, any amount was harmful.

Senator Muskie. This is a prohibition.

Senator Baker. Here you are talking about concentration in living tissue.

Senator Muskie. We didn't finish reading this. Read the next section.

Mr. Billings. "Within 180 days after the date of publication of any list, or revision thereof, under subsection (A) of this section, the Administrator in accordance with Section 553 of Title V of the United States Code shall publish a proposal prohibition of the discharge of such pollutant or combination of pollutants together with a summary of such evidence and a notice of public hearing within 30 days. As soon as possible after such hearing, but not later than six months after such publication, the Adminstrator shall promulgate such prohibition, unless based upon a preponderance of evidence adduced at such hearings, he finds within such period and publishes his findings that a departure from such prohibition for such prollutant (a) will not be toxic in established quantities of discharge and (b) is necessary because a prohibition is not technologically possible."

Senator Muskie. Both findings must be made.

Mr. Meyer. May I suggest a change? Instead of talking about prohibition or effluent standard, say for purposes of establishing an effluent standard, "(including prohibition)" and use it that that is the effluent standard, that zero is the one justified, and go on the basis we are establishing effluent standards for toxic substances and not necessarily just prohibiting them.

Senator Muskie. What is your language change?

Mr. Meyer. Actually it is just a shift in the first page. You say, " . . . establishing an effluent standard (including a prohibition)," which then indicates he can go to zero, if that is what is justified.

Mr. Jorling. I am trying to find the language of the Administration bill.

Senator Muskie. That doesn't sound as prohibitive.

Mr. Billings. This is the language essentially in the Senate-passed bill, again last year, on the Air Bill which we again compromised with the House to establish an emission standard which could be zero.

Mr. Maynard. A related point that relates to what is essentially a no-discharge level, in other words, a prohibition, and a prohibition effectively means that a person is not discharging materials within the tolerance limits of the measuring instrument. For example, in the case of mercury, "no discharge" means in some cases that there, in fact, is a discharge, it isn't

technical.

Probably in the report it might be well to make reference to this, but in the real world there is no such thing as a "no discharge" which cannot be measured.

I have got some readings back from an investigator the other day, and he said all of his readings are within the margin of error system.

Mr. Billings. They are down to parts per million, but less than parts per billion, which isn't measureable, concentrated in fishlife and so on, come back to haunt us.

Senator Baker. There was a fish they found in the Arctic that had a certain amount of mercury that had been dead for 2,000 years.

Mr. Billings. The theory is, once this stuff gets out there, these are basically heavy metals. They concentrate in living organisms. Once they get into the water, into the oceans, into the cells, there isn't anything we can do.

The mercury problem, no one really knows how long the mercury problem will be with us or how bad it will get, where it will peak before it begins to diminish, or what the effects of that peak will be.

The staff thinks that we should attempt to remove that possibility to the greatest extent we possibly can. This tends to shift the burden.

Senator Muskie. You wouldn't say that mercury has peaked

too soon.

Senator Baker. Not if you intend us to stay and work with you. (Laughter)

Mr. Jorling. The Administration language on this point reads "shall publish proposed effluent limitations, including, if appropriate, prohibition of discharges of each such element in compound or combination of elements and compounds together."

It provides that proposed regulation could be a proposed prohibition. This says that they have to set each time they set in motion one of these regulatory proceedings, they have to start a prohibition. Then through the administrative proceeding allow a departure from that.

You could analogize it to the Tunney amendment. You start with the maximum control and then provide that those who assert that it is not necessary have the burden of showing it, which is not necessary.

It is a procedural thing as well as substantive thing, to put your burden of showing that you did discharge amounts of these substances without producing toxic effects on those who desired to discharge.

Senator Muskie. Does anyone feel that is unreasonable?

Mr. Jorling. You do have a situation where in some instances, for instance, fluorine, which is a toxic substances under this definition, is injected into the public water supplies.

Mr. Billings. There is in the scientific community now a

very, very strong feeling that there is so much fluorine getting into the environment from emissions from various kinds of processes that we are fiddling with disaster on the fluoridation problem. This is not the fluoridation nuts. This is some of your better biologists who are terrified by this.

Senator Muskie. Do we want to be the catalyst?

Mr. Billings. Somebody has to catalyze.

Mr. Braymun. One other problem that was pointed out to the staff a couple of weeks ago is the problem of where an industry is located along a river in which there is natural mercury. Under this language, if they took any water in, even if they had no mercury in their own processing operation, they would be required, in effect, to eliminate discharge of that mercury. They were suggesting that the best thing to do was have language that, in effect, says, "No prohibition, but prohibition in the terms of no more than what is naturally there in the river body."

Senator Baker. That point came up in a plant in Tennessee where literally they got into trouble by pumping water out of a river and they were prohibited from putting it back in. Even if they did nothing with it, they couldn't put it back in the river. (Laughter.)

They installed a great big gas-powered heater, heated the water and evaporated it up in the air. There is no prohibition against scattering it over the land. (Laughter)

Mr. Jorling. I think the point that Hal raises can be overcome providing that there is prohibition against injecting.

Mr. Maynard. I think it is well to recognize at this point the Administrator will propose a prohibition, and he will say the prohibition is something like .0004 parts per billion, because you can't measure anything beneath .0004 parts per billion.

Senator Muskie. If this law is enacted, every water system that is injecting will have to come down here with proof.

Senator Baker. If the Administrator decides, he could set another standard that would permit fluoridation.

I think you have the same problem with silver.

Mr. Billings. Can we test this and go ahead and leave it in for the purpose of testing? That is obviously what we are doing.

Senator Baker. I think that is fine. I want to say now that I am concerned that we are establishing a test on the basis of concentration in the tissue rather than concentration in the water. There is a relationship between the concentration in the water and the ability of the body to assimilate and concentrate.

Mr. Billings. We are not talking about just the human body.

Senator Baker. I know. I am not sure the test ought to be the concentration in living tissue. I think the test ought to be in the concentration of fluid. That is more technical. When you test it and bring it back, see what they say about that

Mr. Meyer. The problem is, the one that led to the tissue concentration, is these discharges will congregate at some point in the Antarctic and in the oceans and it is at that point that the concentration raises to the really dangerous level and we will have nothing further back that says this is the cumulative impact coming out of all of the facilities operating.

Mr. Billings. The best example I know is when Bob Bartlett came before the committee to testify on radiation and the fact that as a result of the upper area testing, the tundra grass in Alaska, which never dies, the caribou ate the tundra grass and the Eskimoes ate caribow and the Eskimoes were way out of sight on the concentration of radiation, compared to any acceptable health norm.

Mr. Jorling. On the reproduction we have an awful lot of people who are expecting to see this so they can begin to react. This includes the Administration. They have read it several times, but they would like time to suggest it.

Senator Baker. We are in no position to make a committee print. As far as I am concerned, if the staff wants to put together a syncpsis of some of the ideas and give that to the appropriate people, I think that is all right.

Senator Muskie. I would just prefer to tell them these ideas have not crystallized enough.

Mr. Meyer. Postponed until the time as the committee

decides to put it out. We have got to guarantee to everybody that they will have at least a week when it is released to get their comments.

Senator Muskie. Let's not get into specifics. We are going to try to give enough time.

Senator Baker. I would suggest that we not try to keep this totally secret.

I think that the Administration and other witnesses might very well profit from some synopsis or idea of how we have gone on it.

Mr. Billings. We have been trying over the past several weeks to expose people to the document without releasing the document itself, because of the difficulties that that creates. We either don't let it out or we do.

Senator Baker. Then don't.

Mr. Jorling. For our purposes, if we take this trip, what we could do is send this thing back over without change or some additional galleys, so we could take them and hand them to people and they could read it. We could also get lines put on it.

Senator Muskie. I think it might be well, in all future prints of this kind, if we have a note somewhere to the effect that none of this has been approved by the committee, that all of it represents ideas that are being presented. I wouldn't even identify the staff as the source. The print includes ideas that

have been developed for consideration of the committee, and none of them have been approved as yet.

Is there anything else in here, in (B)(2)?

Mr. Billings. No, I don't think so, Senator. We will have to go over all of this with the members. I can't see wasting your time.

Senator Muskie. I am not so sure I agree.

Mr. Billings. I am not saying you agree.

Senator Muskie. It seems to set a different standard than we have already talked about.

That might be at a level that is toxic, the way this reads. In (B)(1) you set both requirements, that it not be toxic and that it is necessary because prohibitions are not technologically possible. It might not be sufficient for total prohibition.

The toxicity level might be above what is technologically feasible.

Mr. Billings. In which case the prohibition would prevail.

Senator Muskie. That isn't clear from 2.

Mr. Brayman. It seems to me there is somewhat of an inconsistency when you say we have something listed as toxic. Then it is shown not to be toxic, but it still has to be prohibited, because prohibition is technologically possible.

If it is not toxic, it would normally fall under the non-nutrient section, which comes up later, which doesn't have the requirement that if it is technologically possible, you could

prohibit it.

It seems to me there is somewhat of an inconsistency in the use of the word "and" just before (B). I don't think you can do it by just inserting "or," but somehow or other it seems there ought to be a way of working that out.

Mr. Jorling. The assumption, presumption on this particular provision, is that you can define for the purposes of establishing an effluent standard where technology does not mean prohibition for those toxic substances in certain quantities of discharge.

If, however, it is technically possible, there is a presumption that if the material gets out somewhere down the line, it is going to produce a toxic effect. This is to avoid that later discovery. So if you can control it completely, then control it completely. If you can't, only as a last resort set a level which you know on present evidence will not produce toxic effects. But the assumption is because of its nature it will product toxic effects.

Mr. Meyer. Going back to the suggestion we made before going on effluent standards basis, which standards would include a prohibition, then you can phrase all of (B)(1) in terms of either its toxicity or level of its toxicity and the question of technical feasibility in controlling it.

That is the basis upon which the standard is set. The standard may be zero. I think you can handle that whole question

by saying it has got to be a prohibition. The duty of the statute is to set the effluent standard which meets the health standard you have got. If that requires a prohibition, fine.

Mr. Billings. The question is the burden of proof.

Mr. Meyer. The burden of proof should be on the party that says he should be able to discharge. If he sets the lowest possible standard which his research justifies as being set, and then if somebody wants to question that degree of control, they have to come in and question that degree of control.

Mr. Billings. By setting forth pollutants in the statute which would be toxic in quantities, aren't we setting up a system in which you would want to require the polluter to justify a departure from zero?

Mr. Meyer. You justify departure from zero based on the fact that technology doesn't exist.

Mr. Billings. No. It is toxic, and the technology doesn't exist. You have to close the plant.

Mr. Meyer. The definition of "toxic," if it does not concentrate at 15 parts ---

Mr. Jorling. The definition of toxic is not triggered by the amount of discharge. It is triggered by substance. Mercury in a concentration of discharge doesn't product effects. Mercury does product toxic effects when you eat swordfish that has accumulated it out in the ocean.

Senator Muskie. Can you treat them both alike? If you are

talking about something like mercury, don't you prohibit it altogether?

Mr. Jorling. That is what we are trying to achieve here.

Mr. Billings. That is why we use selected groups. Those are theones you don't want to discharge in the environment.

Senator Muskie. I am asking whether mercury will ever meet the requirements of (A) and (B) at the end of that first paragraph. If what you are worried about is the eventual concentration somewhere down the line, then you are not going to permit its entry into the environment at all.

Mr. Billings. That's right.

Senator Muskie. Will some of these others ever meet (A) and (B)? Shouldn't you distinguish between those that you know won't meet (A) and (B) and those which you are talking about as being toxic and contact in some concentration? Is there a difference or isn't there?

Mr. Jorling. There is a difference. As proposed here, we would include them both in the same regulatory scheme, because of : definition has two elements: One is concentration in living tissue, and the other element is if upon exposure it produces a toxic effect in the water.

So some of these things aren't regulated pursuant to this for the reason mercury is, because when they get out into the receiving waters, they produce toxic effect to whatever happens to come into contact with them.

There an effluent standard might be possible where you could say the toxic effect from exposure will not be produced at these levels of discharge.

Mr. Billings. W l should prohibit the toxic ones in any quantity.

Senator Muskie. Shouldn't you have a definition of toxicity?

Mr. Jorling. Of the effect. That gets harder than just qualifying the substance as toxic in certain conditions.

Mr. Billings. Wouldn't it be easier to identify the pollutants which eventually cause toxicity, prohibit them entirely, then you just do that by statute. Discharge of mercury you prohibit, period.

Then set up a regulatory regime for those that are toxic quantitatively.

Mr. Jorling. I think in an ideal situation that would be the best. I would prefer that.

Senator Muskie. What is being done in the case of mercury now?

Mr. Billings. It is prohibited.

Mr. Jorling. They have not really prohibited it. They have come up with negotiated settlements.

Mr. Billings. The paper company in Maine closed down that part of its process that was discharging mercury in order to stop discharging mercury. This was what they were told to do. Then they went on to control -- to compromise with the issue,

this wasn't changed, that the purpose of the enforcement action was to stop the discharge and several of them did entirely by closing the plant or by stopping certain processes in plants.

Mr. Meyer. Is there enough hard scientific evidence to say that the items listed are toxic? Maybe it would be better to have a statutory prohibition for those items and then maybe giving the technological problem that they have, give the Administrator under certain very tight circumstances leeway.

Senator Muskie. I think you have to distinguish between the two kinds, those that are dangerous because they get in a light chain and eventually concentrate.

What else fits that besides mercury? Nickel?

Mr. Jordan. That goes to the question that Senator Baker raised earlier, although there may be concentrations of silver of 1500 parts per million in tissue which are toxic, it may be that the rate of absorption of tissue -- we know mercury is -- but it may have quite an amiable amount of silver in the water and the nature of the tissue may be such that you would never reach a concentration of 1500 parts per million.

So although 1500 parts per million might be toxic, if you had it, it may be that the effect of some of these substances is going to absorb it.

Mr. Meyer. There is one other point, the one raised by fluoride. You have something which one group of scientists say is essential to good public health, for water fluoridation purposes, and in certain concentrations is then dangerous to human

health.

I think for some of these things we have got to provide a balancing mechanism. Some of them may be essential to human life.

Senator Muskie. That is the same distinction I made. If it is something that has the tendency to create a light change, you treat it in one way; if it is something that toxicity depends upon its proportions in the water, then what you are talking about is levels.

Even as to those, you are talking about taking a drink of water out of the end of the pipe, how do you measure that, at the immediate point of discharge or with some dilution?

Mr. Billings. You have to measure the standard here on the basis of the immediate point of discharge.

Senator Muskie. So that has got to be clearly nontoxic at that point so you could drink that water so far as this substance is concerned.

Mr. Westman. If I could say the way we had the definitions of toxic materials, you could distinguish either those which cause a toxic effect upon exposure to what is in the water or those which have an effect after they reach a certain concentration in the tissue.

As you can imagine, there are problems for an administrative predicting how concentrated a material will become. I guess the worst stickler is the selenium, because selenium is required

in very low amounts for healthy livestock especially, but at higher levels of concentration it can be toxic to livestock among other things.

So selenium should be treated as a neutral element which can be controlled as part of the implementation plan, whereby a state can regulate the amount of selenium getting in the water, extrapolating to how much can be concentrated to prevent its getting concentrated to the toxic level.

The selenium falls under a nutrient category.

Something like mercury is not ever required by living organisms. Therefore, it can be set as a prohibition, if the Administrator so desires, or at some other effluent level.

Senator Muskie. How can he justify any other level?

Mr. Westman. We don't really know enough about potential concentration to be absolutely sure how much, at what ambient level we are going to get toxic effects, so a cautious administrator would put a prohibition. But it is possible an administrator would say, "The average natural level of mercury is two parts per million and at that level we only find natural toxic levels in certain swordfish."

So that is about the level at which we will let it remain.

Senator Muskie. How do you control the concentration that will get into the swordfish by controlling out much you let out of a discharge?

Mr. Billings. How many would be included in the category

of the ones you can't control?

Mr. Westman. Cadmium, mercury, cobalt, lead, antimony is expected to accumulate, and some of these others are more in doubt -- polychlorinated biphenyls, also concentrates and so does arsenic.

Mr. Meyer. Just based on the discussions that were had with the manufacturing chemist, you have got a class of use here that maybe should be subject to control.

That is the chromium that is put into water pipes in order to keep them from rusting. I think that someplace along maybe the Administrator should be able with some assistance sit in justice as to whether the social costs of having the chromium come into the water should be measured against the rate at which pipes rust and maybe that is just a cost of operation of plant and replace your pipes from time to time.

Mr. Jorling. The regulation will have to be triggered to what you add to the system.

Mr. Meyer. Some of these things are added into the water stream for the purpose of maintenance itself. Is the cost to society justified by that operation?

Senator Muskie. You are saying this might be interpreted as prohibitive use of chromium in pipes?

Mr. Meyer. It might be that we should prohibit its use in pipes.

Mr. Grundy. The chromium pipes do not create the problem.

It is the use of the chromium as adding to the water.

Senator Muskie. Let's go through 307.

Mr. Billings. Senator, this is a category of pollutants which are not envisioned as being in the water environment. They are not clearly toxic. They don't fall in the toxic category.

"The Administrator shall, within 30 days after the enactment of this section and from time to time thereafter, compile and publish in the Federal Register a list of non-nutrient pollutants or combination of such pollutants for which effluent standards are to carry out the purposes of this Act.

"The Administrator shall within 90 days after the publication of the list under subsection (A) or revision thereafter, publish in the Federal Register in accordance with Section 553 of Title V of the United States Code, proposed regulations establishing effluent standards for such non-nutrient pollutants or combination of such pollutants included in such list.

"The Administrator shall establish such standards to insure that the discharge of such pollutants or combination of pollutants will not degrade the waters of the United States as determined by" ---

Senator Muskie. What do you mean by "non-nutrient pollutants

Mr. Jorling. The attempt is to classify those pollutants which accelerate the rate of eutrophication. Those are nutrient pollutants. Then an overriding category of toxic pollutants.

The remaining are non-nutrient pollutants, those produced as a result of industrial processing that are not natural to the environment and demand uniform emission or effluent controls on industry, to achieve the kind of control necessary to protect the environment, which is more appropriate from the Federal level with its Federal research base, rather than have each state try and develop and control a system based upon its own research base.

Senator Muskie. What are some of them by name?

Mr. Jorling. Dyes, inks. We tried to come up with some. Some plastics, some pesticides. There are some drugs and also a lot of petrochemicals.

Mr. Westman. Anything which can be taken up by living organisms.

Senator Muskie. They are not soluble?

Mr. Westman. Not all of them.

We have written into the definition the fact that the material, something like oil, for example. Once it is broken down, it can be considered a nutrient. If it stays in a non-degraded form for a long time, then it is basically a non-nutrient It is not taken up by organisms.

Mr. Jorling. Most of these substances right now would be without control under the existing law. Existing law parameters are generally related to eutrophication.

Senator Muskie. In terms of particular industries, what is

the impact?

Mr. Billings. Uniform effluent controls.

Mr. Jorling. It will require them to comply with federally set effluent controls. Most of these are chemicals in the basic industries, major or manufacturing, chemicals, petrochemicals, ink and dye and paint manufacturers, those kinds of things.

Mr. Meyer. Many of the difficult things were controlled years ago.

Senator Muskie. So there is no problem of technological or economic feasibility?

Mr. Billings. Economic feasibility is an arguable point.

Mr. Jorling. That point has been raised by the industry who has representatives who have reviewed this. They say, "Where is the provision requiring the Administrator setting an effluent stnadard to consider feasibility?"

Mr. Billings. I suppose with dyes, like any of these other requirements that you can impose on old plants, you are talking about some impact that may have rheumatic and unacceptable economic effects. This isn't any different than any of the other requirements.

Senator Muskie. What is the definition of the standards that are to be applied?

Mr. Jorling. It is really one of preventing the discharge of the pollutants that would produce any of the effects that are itemized here, what are the effects on the receiving water,

but on the environment, where do those things go, where do they ultimately come to rest?

It is a much broader test. There it happens to control. This is related to what happens when it gets out into the environment.

Mr. Billings. The point is you could have a new source of pollution whereas here technological feasibility would be ireelevant if you found degradation as defined in these categories.

Mr. Jorling. I think we have to adopt some kind of a reference point to availability of the control.

Senator Muskie. What happens if there is a multiplicity of similar sources on the same stretch of water? What do you do?

Mr. Jorling. We have got that problem everywhere.

Mr. Westman. You mentioned earlier that the states can in their implementation plan set overall controls of ---

Senator Muskie. Not in effluent standards.

Mr. Westman. It would be beyond effluent standards. If a particular locality found there were too many plants, each dumping out the allowed effluent such that the overall ambient quality was not desired, then the state could, in fact, include that.

Mr. Jorling. It is provided in a general retention of state authority that they can establish a more stringent requirement on any of the materials that the Federal Government establishes an effluent standard on, for any reasons they may

choose.

Mr. Meyer. In the Air Bill, when it went to Congress, we had selected source pollutants and new source performance. The category itself is a very, very difficult category. Couldn't we combine the two and provide for new source performance standards on nutrient pollutions and source performance on all non-nutrient and nontoxic, which would fit these into the category?

I can understand the toxic and nutrient categories. So really what this is, in effect, everything else, so why not just list it as everything else and put the two of them together and provide for the best possible control that you can get.

Mr. Jordan. One very basic question is why they are pollutan if they are not absorbed by organisms.

Mr. Billings. By being foreign to the watter environment, they are pollutants.

Mr. Jorling. They are not absorbed in the sense that they are part of the living material. They become protoplasms.

Mr. Westman. I think you are asking the difference between a pollutant and a toxic pollutant. Into this category I would place anything which is not taken up by an organism by an essential, and which is not toxic. The definition of toxic is really those substances which are poisonous in rather small amounts. Something like a dye is not poisonous in a small amount, but if you get large enough quantities of it, you can have things

like colored shellfish.

Certain hormones are getting into the water supply, through the urine of women who are on the pill, large amounts of estrogens are getting in the water. These are not apparently toxic in small quantities, but they could accumulate and be a problem.

Mr. Maynard. The new source standards are not intended to detract from these other sets of standards, for example, with respect to toxic materials. And the non-nutrient pollutants, I think that is the place where it comes up most directly. That certainly appears to require a kind of control that may be greater than the control that is applied in the case of new source standards.

Mr. Jorling. What Barry suggested is exploring the same technique we used in the Air Bill, after you have new source performance and standards, then those pollutants which are not otherwise regulated, you regulate the same way.

Senator Muskie. What bothers me about this is the application of national effluent standards to them.

It seems to me that in most cases the effluent would depend upon concentration of such industries in a particular stretch of water and the overall water ambient quality that you want to achieve.

Mr. Grundy. The number of these materials we are talking about, because they do not contribute to eutrophication. They, in turn, do not degrade and they would tend to accumulate over

long periods of time in the environment.

So the question arises as to potential over a long period of time of effects which we do not know of now. We are really talking about a sort of preventive approach, saying they don't contribute to eutrophication, but in turn they don't degrade. Therefore, we should be cautious and restrict them to the degree possible, because they do accumulate over time.

Senator Muskie. You are saying that any foreign substance ought to be controlled. I am not quarreling with that. You are not really talking about a national effluent standard.

That is the thing that troubles me, unless you are talking about only those areas in which there is a single plant that falls into this category. If you have more than one, then you have to depart from that standard.

Mr. Jordan. It is somewhat back to what has been suggested in relation to the analogy that Leon drew about the boats. What we ought to do is set a national effluent standard to the degree we can best control it to every foreign object.

Senator Muskie. You may want a middle course. You might be able to permit three, four, six, eight, nine, ten plants, any number, in this kind of thing.

Mr. Jordan. To give municipalities or localities on large bodies of water an advantage over communities with smaller receiving bodies?

Senator Muskie. No, what I am talking about is the nature

of the effluent. If you have one source in this area, it is not toxic. It is foreign and some concentration is bad for some things.

If you determine that concentration, that discharge, whatever it is, at whatever level, for one plant, does that make it a national effluent standard? You could have two plant just as well.

Mr. Billings. You are not talking about water quality impact. You are talking about the point of discharge. So the standard would be the same.

Senator Muskie. It is not toxic.

Mr. Billings. No, but you are talking about a standard set.

Senator Muskie. I am not talking about an absolute prohibition. What degree of control?

Mr. Billings. As best as you can do.

Senator Muskie. You are not going to put plankton on, pile it around the end of the discharge pipe, to determine what the effect is.

If you measure the effect of such pollutants on human health and welfare, including but not limited to plankton, fish, shellfish, wildlife, shorelines and beaches, you are not talking about point of discharge effect, you are talking about a water quality effect.

Mr. Billings. There are three categories of pollutants -- toxic, water quality and these pollutants. These are the

pollutants we have the greatest dilemma with. We are not exactly sure what their effects are. In most cases they are foreign to the water environment with no clear definition of whether they have any water, toxicity or concentration effects.

But at the same time they are getting out there. We are concerned about them. Are you to drop this provision entirely and come back ten years from now and say, "Maybe we should have done something about those pollutants." YOu can have a regulatory mechanism which says that if those pollutants don't fall in these two categories, we will try to the greatest extent we can to keep them from getting in the water environment to protect the future.

This criteria is confusing because that suggests a water quality effect.

Senator Muskie. The point I am raising is the one you haven't touched at all, whether or not the concept of the national effluent standard is where to come to grips with this.

Mr. Billings. You are right. This doesn't meet that criteria, the criteria being we want to get rid of these because we don't know what they are doing. We have got two kinds of pollutants we want to get rid of because we know what they are doing. This doesn't relate to this criteria. It relates to the fact you want to reduce their quantity in effluent to the greatest degree practical.

Senator Muskie. I don't see how that, as a concept of a

national effluent standard, fits the problem as you have now expanded on it.

Mr. Billings. I don't know of any other way you are going to do it.

Senator Muskie. Then tell me what your national effluent standard is going to be. Is it going to be predicated upon the proposition that you are talking only about places where there is only one such plant in a given body of water?

Mr. Billings. No.

Senator Muskie. Are you saying that no matter how many plants there are, the standards are going to be the same?

Mr. Billings. Yes.

Senator Muskie. I am saying, then, that the effect on plant, fish, shellfish, wildlife, shorelines and beaches is irrelevant, so what is your test?

Mr. Billings. Your test is strictly technological feasibility or some other test.

Mr. Jorling. It should be. It isn't here.

Mr. Billings. I am not arguing for this language.

Senator Muskie. It is this language that I am exploring.

Mr. Billings. I am suggesting that the language needs to go back to the drawing board because we have a category of pollutants, things being added to the water that aren't there, that should not be there, that we don't know what their effects are and we want to get rid of them. The best way to get rid of them is

uniformly so nobody gets hurt in the process of controll any more than anybody else gets hurt in the process of control.

Senator Muskie. Are you saying that these materials can't be got at through water quality standards?

Mr. Billings. That's right.

Senator Muskie. Why not? Why can't you get at dyes? You are talking about water quality standards that are supposed to reflect a set of considerations, too. Why can't you write it in?

Mr. Jordan. I think the answer to that problem is that if we knew precisely what these agents did, then we could set an intelligent standard.

Senator Muskie. What is wrong with saying, as we do in water standards, that there is this category, define it the best you can, and say these ought to be controlled by water quality standards?

I can tell you a number of wool textile plants on Maine streams that are dumping dye in those streams. That dye doesn't do any good to anybody. There is no reason you shouldn't control it for water quality standards.

Mr. Billings. I will accept that, but let's talk about plastics.

Senator Muskie. Plastic isn't the same as dye. Why treat them the same?

Mr. Billings. I am suggesting there are other pollutants

under this category other than dye.

Senator Muskie. If you tossed in a lot of cats and dogs that are different, how can you justify treating them the same?

Mr. Billings. You are not treating the same.

Senator Muskie. Yes, you are. With the national effluent standard.

Mr. Jordan. One way to explain it, I think,,Senator, is what is being proposed here, disregarding this language, is to abandon essentially our old criteria concept, which our standards have always been based on the effect of certain quantities of certain agents in the water.

Senator Muskie. On the health and welfare.

Mr. Jordan. Or whatever.

Senator Muskie. Health and welfare was never limited to critical effects or health effects.

Mr. Jordan. But there has always been a criteria about them, a certain part per million, has an identifiable effect on something. That has been the criteria.

Senator Muskie. Plankton, fish, shellfish, wildlife, these are all effects that can be identified.

Mr. Jordan. I think what the staff is really suggesting is that if this language would be stricken, we in effect abandon the criteria approach and simply set a standard for these agents, a national standard that is id--tified as that which we are capable of obtaining.

Senator Muskie. How are you going to treat them all alike?

Mr. Jordan. I think, for example, in the textile plant you could have technology for removing dye from effluent. Then you would set that as a national standard.

Senator Muskie. What result are you going to require that the technology meet, prohibition?

Mr. Jordan. Effectively, I think that is it.

Senator Muskie. That isn't what you are saying.

Mr. Jordan. I am saying we are going to identify what is technologically possible.

Senator Muskie. How are you going to stretch the argument for technologically possible unless you had in mind a final result? If it is technologically possible to eliminate all dyes, are you going to require it?

Mr. Jordan. Under this approach.

Senator Muskie. Whether or not there are harmful effects or not?

Mr. Jordan. That's right.

Senator Muskie. Why don't you put this under "toxic substances"?

Mr. Jordan. Under "toxic substances" we do know what the long-term effects are.

Senator Muskie. If you are just as fearful as you are of the known effects as you are the unknown, why don't you treat them the same?

Mr. Billings. We would like to, but it would be difficult.

Senator Muskie. What result are you going to push for here?

Mr. Billings. The result we would try to push for is one which achieves a minimum amount of economic discrimination, and achieving a maximum amount of pollution control. That is why we use it.

Senator Muskie. Why don't you just say, you don't have to identify the effect, we just don't like the idea of this stuff going into the water and all of it has got to be stopped?

Mr. Billings. That is what we are saying.

Senator Muskie. Why mix up effects on health?

Mr. Billings. You are absolutely right.

Mr. Jorling. We had confused concepts here.

Senator Muskie. I don't buy it necessarily at this point.

Mr. Jordan. You don't want to treat them the same way as you do toxic substances. I don't think you want to prohibit any discharge of a dye into the water when there is no evidence it is harmful.

Senator Muskie. That gets back on the point. It depends on how many are dumping it.

Mr. Billings. If there are no toxic effects regardless of the amount, what difference does it make?

Senator Muskie. You are prohibiting these that you don't know.

Mr. Billings. We are trying to take a step in kind.

Senator Muskie. So you are not concerned about the facts because you don't know them, but you are going to get rid of them anyway. How far do you want to force the state of the art? Tell them to get rid of them?

Mr. Billings. Yes, I would say that would be true. It might take 15 or 20 years.

Senator Muskie. If it could be done today, would you prohibit it, whatever the cost is, if the technology is available?

Mr. Billings. I didn't say that. I said as quickly as practical. This is a category in which you have some flexibility as to economic feasibility also.

Senator Muskie. Why should we have economic feasibility? (Laughter)

You say you are not concerned with the effects. Why are you concerned with economic feasibility?

Mr. Billings. I am not concerned with economic feasibility but to have flexibility to achieve economic feasibility.

Mr. Jordan. Under this section what we are doing is saying the national effluent standard will be set at that level, which is the psychologically accomplishable, and that is quite different from the prohibition approach taken on the toxic substances.

Senator Muskie. The objective is to stretch the state of the art until you can prohibit it. Here you don't know whether you want to stretch the state of the art that much. You are

just saying that as of now we may have arrived at this state of the art, but for whatever purpose, whether it is related to effects or not, you say you are going to get a mishmash of controls because nobody is concentrated on stretching the state of the art in order to achieve a uniform result.

So what I am asking you is, how far should we press them to achieve it? Our whole concept has been to enhance water quality by cranking up the state of the art until we can eliminate all of the discharges.

Is that what we are trying to do? That is the question I raised. If that is it, why don't you gear your law to it?

Mr. Jordan. If you could show at some time in the future that one of these agents being covered is in certain concentrations harmful, you would certainly want to promote technology to reduce it below that level.

Senator Muskie. That is when you get into the criteria of the ambient water quality question. Every time you open that door, I am going to throw that one in.

Mr. Maynard. This suggests a need for a rather substantial research in the area to identify them.

Mr. Billings. That may be irrelevant to most of these pollutants. Most of these may, in fact, be completely controllable.

Mr. Jorling. The new source standards will take care of these pollutants as new plants generate them. What these

standards would be applied to would be to existing sources.

Mr. Meyer. The toxic pollutants that are listed, with the possible exception of selenium, according to Walt, are all non-nutrients. Why don't we just have the category of non-nutrient and give the Administrator the right to prohibit those non-nutrients which are toxic and to develop the controls, effluent controls for those which can be controlled?

Mr. Maynard. To follow your idea up, you could have prohibitions on the toxic one, have a technological feasibility test on the ones that are not toxic.

Senator Muskie. Mr. Jordan.

Mr. Jordan. Would it be an unfair statement of your current thinking to say that why should we limit the discharge of the substance that has no identifiable ill effects?

Senator Muskie. No. My only questions have to do with using a national effluent standard approach to control it.

Mr. Jordan. You feel we should only limit those pollutants that have an identifiable effect?

Senator Muskie. No. You may wish to have a total prohibition of some of these things. There is no list of them. So the only thing you can talk about specifically is difficulties.

The committee will stand adjourned.

(Whereupon, at 4 p.m. the committee adjourned, to reconvene at the call of the Chair.)